

REMARKS

The Examiner is thanked for the thorough examination of the present application. The Office Action rejects all claims 1-16 and 20-23. In response, Applicant submits the foregoing amendments and the following comments, where claims 1, 9, and 20 have been amended and claims 24-26 have been newly added. No new matter had been introduced with these amendments. After entry of the foregoing amendments, claims 1-16 and 20-26 remain pending. Applicant respectfully requests reconsideration and withdrawal of the rejections for at least the following reasons.

Claim Rejections under 35 U.S.C. § 101

Claims 1-16 and 20-23 are rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. In particular, the Office Action states that the claimed methods are not tied to a particular machine or do not transform underlying subject matter to a different state or thing. Independent claims 1, 9, and 20 have been rewritten to recite a gateway device performing select acts which ties the respective method to a particular machine. As such, claims 1-16 and 20-23 are directed to statutory subject matter and the rejection should be withdrawn.

Claim Rejections under 35 U.S.C. § 112

Claims 1-16 and 20-23 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite. Independent claims 1, 9, and 20 have been rewritten to recite “wherein a size of the incoming packet exceeds an allowable packet size for a network connection” to further define the respective claim. Withdrawal of the rejection is respectfully requested.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 1-5, 8-13, 16, 20, 21, 22, and 23 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Kitada, et al.* (U.S. Patent Publication No. 2003/0037163) in view of Applicant admitted prior art (AAPA) in further view of *McCullough, et al.* (U.S. Patent Publication No. 2002/0010866). Claims 6-7 and 14-15 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Kitada, et al.* in view of AAPA in further view of *McCullough, et al.* in further view of *Kitamura* (U.S. Patent Publication No. 2002/0010866). Further, claims 1-5, 8-13, 16, 20, 21, 22, and 23 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Applicant admitted prior art (AAPA) in view of *McCullough, et al.* Claims 6-7 and 14-15 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over AAPA in view of *McCullough, et al.* in further view of *Kitamura*.

Applicant notes that there is a fundamental distinction between the claimed embodiments of independent claims 1, 9, and 20 (and therefore all claims) and the cited art. In this regard, each of these claims defines a method for fragmenting an incoming packet into two outgoing packets. The payload of the incoming packet is divided across the two outgoing packets. A significant feature of the claimed embodiments is that the majority of the payload of the incoming packet is embodied in the second outgoing packet.

The fundamental distinction discussed above applies to all rejections. Further, each independent claim is discussed below.

Independent claim 1 recites:

1. A method for fragmenting an incoming packet for transmission as a first outgoing packet and a second outgoing packet, the method comprising:

storing within computer memory of a gateway device a payload of the incoming packet in a plurality of storage units beginning in a first storage unit, wherein a size of the incoming packet exceeds a maximum packet size for a network connection;

the gateway device transmitting on the network connection the first outgoing packet being formed according to a predetermined portion of the payload stored in the first storage unit; and

after transmitting the first outgoing packet, the gateway device transmitting on the network connection the second outgoing packet being formed according to a remaining portion of the payload stored in the storage units;

wherein the remaining portion corresponds to a majority of the payload of the incoming packet.

(*Emphasis added*). Claim 1 patently defines over the cited art for at least the reasons that the cited art fails to disclose the features emphasized above.

The Office Action admits that neither *Kitada, et al.* nor AAPA discloses the emphasized feature that the remaining portion corresponds to a majority of the payload of the incoming packet. Instead, the Office Action alleges that *McCullough, et al.* remedies the foregoing deficiencies.

McCullough, et al. discloses that “fragment size can be tuned for different circumstances to achieve the best aggregate throughput.” Para. 0079. Accordingly, *McCullough, et al.* discloses that the maximum fragment size allowed to be transmitted by a machine can be set (or tuned) to correspond to the smallest MTU of all networks likely to be encountered between the machine and a final destination (which will achieve the best throughput). However, *McCullough, et al.* does not disclose or suggest that a portion of a payload transmitted in a second outgoing packet (after transmission of a first outgoing packet containing a portion of the payload) corresponds to the majority of the payload. Rather, *McCullough, et al.* simply discloses that packet fragment size is able to be tuned. For example, *McCullough, et al.* clearly states that “[s]tandard IP fragmentation is used in the present invention.” Para. 0035.

As such, *McCullough, et al.* does not remedy the deficiencies of *Kitada, et al.* and/or AAPA in disclosing all the claimed features of claim 1. For at least these reasons, Applicant submits that the rejection of claim 1 is improper and should be withdrawn.

With regard to independent claims 9 and 20, these claims recite:

9. A method for fragmenting an incoming packet for inclusion in a first outgoing packet and a second outgoing packet, the method comprising:
storing a payload of the incoming packet as a first fragment and a second fragment in a plurality of storage units within computer memory of a gateway device, wherein a size of the incoming packet exceeds a maximum packet size for a network connection;
the gateway device including the first fragment in the first outgoing packet; and
after including the first fragment in the first outgoing packet, the gateway device including the second fragment in the second outgoing packet;
wherein the second fragment corresponds to a majority of the payload of the incoming packet.

20. A method for fragmenting an incoming packet for transmission as first and second outgoing packets, the method comprising:
storing payload of the incoming packet in a storage unit within computer memory of a gateway device, wherein a size of the incoming packet exceeds a maximum packet size for a network connection;
the gateway device transmitting the first outgoing packet being formed according to a predetermined portion of the payload stored in the storage unit; and
after transmitting the first outgoing packet, the gateway device transmitting the second outgoing packet being formed according to a remaining portion of the payload stored in the storage unit;
wherein the size of the second outgoing packet is larger than that of the first outgoing packet.

(*Emphasis added*). Claims 9 and 20 patently define over the cited art for at least the reasons that the cited art fails to disclose the features emphasized above.

In all relevant respects, the rejections of claims 9 and 20 are similar to the rejection of claim 1, and claims 9 and 20 define over the cited art for the same reasons

as claim 1. Insofar as all remaining claims depend from either claim 1, claim 9, or claim 20, all rejections should be withdrawn for at least the same reasons.

Newly Added Claims

Claims 24-26 have been newly added to further define and/or clarify the scope of aspects of the present disclosure. Applicants respectfully submit that the addition of claims 24-26 do not introduce new matter to the patent application. Since claims 24-26 depend from allowable independent claims (as discussed above) and recite additional features, claims 24-26 are allowable as a matter of law over the cited art of record.

To illustrate, systems of the cited art require information of a fragmented packet stored in all the storage units to be preserved until the data in a last storage unit has been transmitted and therefore do not disclose the subject matter of claims 24-26. Allowance of claims 24-26 is respectfully requested.

CONCLUSION

For at least the foregoing reasons, it is submitted that this application is in condition for allowance and such a notice, with an allowance of all claims is earnestly solicited. If the Examiner believes that a conference would be of value in expediting the prosecution of this application, the Examiner is hereby invited to telephone the undersigned counsel to arrange for such a conference.

No fee is believed to be due in connection with this Amendment and Response to the Office Action. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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